

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions of claims in the application.

Listing of Claims

- 1) (currently amended) A process for pretreating a natural gas under pressure containing hydrocarbons, at least one of the acid compounds hydrogen sulfide and carbon dioxide, and water, wherein comprising the stages of:
- a) cooling the natural gas ~~is-cooled~~ to produce a liquid phase and a gas phase,
 - b) contacting the gas phase obtained in stage a) ~~is-contacted~~ in a distillation column with a liquid phase obtained in stage c) to produce a gas phase and a liquid phase, and
 - c) cooling the gas phase obtained in stage b) ~~is-cooled~~ to produce a liquid phase and a gas phase,

wherein the operating conditions are as follows :

- Distillation column in stage b)

T°C = -20°C to 100°C,

P > 1 MPa abs.

- Pressure and cooling temperature in stage c)

T°C = -100°C to +30°C,

P > 1 MPa,

- Temperature to which said natural gas is cooled in stage a)

0 to 50°C.

- 2) (original) A process as claimed in claim 1, wherein in stage c), the gas phase obtained in stage b) is cooled by means of a heat exchanger.

3) (previously presented) A process as claimed in claim 1, wherein in stage c), the gas phase obtained in stage b) is cooled by means of an expander.

4) (currently amended) A process as claimed in claim 2, ~~wherein~~ including the further stage of:

d) cooling the gas phase obtained in stage c) ~~is cooled~~ by means of an expander to produce a gas phase and a liquid phase that is recycled to stage b).

5) (currently amended) A process as claimed in claim 3, ~~wherein~~ including the further stage of:

e) ~~at least one of the gas phases~~ compressing the gas phase obtained in stage c) ~~and in stage d) is compressed~~ by using the energy recovered from the expander.

6) (previously presented) A process as claimed in claim 1, wherein in stage c), the gas phase obtained in stage b) is cooled by means of a venturi neck, said liquid phase being discharged in the vicinity of the venturi neck and said gas phase being recovered at the outlet of the divergent tube of the venturi neck.

7) (currently amended) A process as claimed in claim 6, wherein in stage c), said liquid phase discharged in the vicinity of the venturi neck is cooled to produce ~~the a liquid that is recycled to stage b) and a gas phase.~~

8) (currently amended) A process as claimed in claim 1, wherein ~~at least one of~~

the gas ~~phases~~ phase obtained in stage c) and ~~in stage d)~~ is used to cool at least one of the gas ~~phases~~ phase obtained in stage a) and the gas phase obtained in stage b).

9) (currently amended) A process as claimed in claim 1, ~~wherein~~ including the further stages of:

f) vaporizing at least part of the liquid phase obtained in stage b) ~~is vaporized~~ and feeding said vaporized at least part of the liquid phase ~~is fed~~ into the distillation column so as to create an ascending ~~vapour~~ vapor flow in said column.

10) (currently amended) A process as claimed in claim 1, wherein part of the heat of the liquid phase obtained in stage b) is used to heat the gas phase obtained in stage a).

11) (previously presented) A process as claimed in claim 1, wherein in stage a), the liquid phase and the gas phase are separated in a drum and at least part of the liquid phase obtained in stage b) is fed into said drum.

12) (canceled)

13) (original) A process as claimed in claim 1, wherein the natural gas under pressure has a partial hydrogen sulfide pressure of at least 0.5 MPa.

14) (currently amended) A process as claimed in claim 1, wherein a the distillation

column ~~having~~ has at least 3 theoretical stages ~~used~~.

15) (original) A process as claimed in claim 1, wherein in stage a), the natural gas is at a pressure ranging between 6.5 MPa and 12 MPa, and at a temperature above 15°C.

16) (currently amended) A process as claimed in claim 1, wherein including the further stage of:

g) feeding the liquid phases obtained in stages a) and b) ~~are fed~~ into a well.

17) (new) A process as claimed in claim 4, including the further stage of :
compressing at least one of the gas phase obtained in stage c) and the gas phase obtained in stage d) by using the energy recovered from the expander.

18) (new) A process as claimed in claim 4, wherein at least one of the gas phase obtained in stage c) and the gas phase obtained in stage d) is used to cool at least one of the gas phase obtained in stage a) and the gas phase obtained in stage b).